

# CS 378: Autonomous Intelligent Robotics

<http://www.cs.utexas.edu/~jsinapov/teaching/cs378>

Spring 2016

Tuesday and Thursday 3:30 - 5:00 p.m.

SAC 5.102

University of Texas at Austin

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Office Hours: Mondays 10 am - noon and Wednesdays 3 - 5 pm

## Course Description:

The focus of this course is on research involving intelligent and autonomous robots. In particular, specific topics covered this semester will include human-robot interaction, computational perception, and developmental robotics. Throughout the semester, the students will use the mobile robots that are currently part of the building wide intelligence (BWI) project. The idea is to have a pervasive intelligence throughout the building, in the form of robots that will perform a variety of tasks, such as leading people to their destinations or locating a person in the building.

The main goal of this course is to complete a small research project, advancing the abilities of the current BWI system. Participation in the class discussions will also form a significant part of the grade. Class meetings will consist of discussions based on assigned readings and updates on project progress.

## Readings:

There is no textbook for this course. Instead, relevant research papers will be initially assigned, and later chosen by the students following their interests.

**Organization\*:**

This class will be taught as a seminar. You are expected to actively participate in class discussions and complete the assigned readings in advance.

\* The instructor reserves the right to change any and all aspects of this class for any reason or no reason at all (a.k.a., academic freedom).

**Prerequisites:**

A strong interest in the question, “What is intelligence and how can it be implemented in a physical robot?”

For best results take two lectures weekly. Common side effects may include sleepless nights, broken robots, nervousness, and banging head on keyboard. Frequent visits to the mentors and the TA have been shown to alleviate some of those symptoms. Talk to your instructor if this class is right for you.

**Course Requirements:**

Grades will be based on:

- class participation (10%);
- written responses to the readings; (10%)
- preliminary assignments; (60%)
- a final programming project. (20%)

**Students with Disabilities:**

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. To determine if you qualify, please contact the Dean of Students at 471-6529; 471-4641 TTY. If they certify your needs, I will work with you to make appropriate arrangements. Further information can be found at <http://www.utexas.edu/diversity/ddce/ssd/>.

**Policy on Collaboration:**

You are encouraged to form study groups and discuss the reading materials assigned for this class. You are allowed to discuss the homework assignments with your colleagues. However, each student will be expected to write his own solutions/code. Sharing of code is not allowed.

IMPORTANT: Cheating, plagiarism, and other academic misconducts will not be tolerated and will be handled according to UT’s academic dishonesty procedures, which are posted here:

<http://www.cs.utexas.edu/users/ear/CodeOfConduct.html#honesty>

**Attendance:**

You are expected to attend each class and actively participate in the class discussions. If you miss a class, it is your responsibility to find out what we talked about, including any announcements.